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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,369	09/20/2006	Kark-Heinz Dittmann	3837	8870

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EXAMINER
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HE, AMY

ART UNIT	PAPER NUMBER
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2831

MAIL DATE	DELIVERY MODE
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11/09/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/593,369	<b>Applicant(s)</b> DITTMANN ET AL.	
	<b>Examiner</b> AMY HE	<b>Art Unit</b> 2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>09/20/2006</u> .  | 6) <input type="checkbox"/> Other: ____.                          |

### **DETAILED ACTION**

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

#### ***Specification***

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because the abstract contains two paragraphs. Correction is required. See MPEP § 608.01(b).

#### ***Claim Objections***

3. Claims 1, 9, 11, 13 and 14 are objected to because of the following informalities:

- 1) It is suggested that applicant rewrite claim 1, so that it is more clear what is included in the body of the claim. The following is an example of claim 1:

Art Unit: 2831

1. A measuring device (1) for detecting signals, particularly signals in an ignition system of an internal combustion engine, said measuring device comprises:

a signal line (2); and

a measuring electrode (3) connected to the signal line (2) for coupling a signal to be detected into the signal line (2), wherein the measuring electrode is characterized by a flexible tip (4).

2) The use of "and/or" in claims 9, 11, 13 and 14 are objected to because it is not clear whether the claims includes "and" , or "or" in the body of the claims. Replace "and/or" with either "and" or "or".

3) It appears that claim 14 should be dependent upon claim 13 instead of claim 1. Otherwise, "the illumination" ( on line 4) lacks antecedent basis.

Appropriate corrections are required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-7, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Grover et al. (U. S. Patent 4, 302,724).

As for claim 1, Grover et al. discloses a measuring device (in Fig. 1) for detecting signals(engine timing signal), particularly signals in an ignition system of an internal combustion engine, with a signal line (see Fig. 1) and a measuring electrode (probe 10) connected to the signal line for coupling a signal to be detected into the signal line, characterized by a flexible tip (the tip portion of the combination of tubular member 12 and the flexible tube 45).

As for claim 2, Grover et al. discloses the measuring device as recited in Claim 1, wherein the length of the tip is variable (i.e., the length could be varied by including or not including the flexible tube 45 ).

As for claim 3, Grover et al. discloses the measuring device as recited in claim 1, wherein the tip (4) is modular in design (i.e., flexible tube 45 and extension tube 48 ).

As for claim 4, Grover et al. discloses the measuring device as recited in claim 1, wherein the tip includes tubular segments (flexible tube 45 and tubular member 12); one end of a segment (e.g., 45) is pivotably inserted into another end of another segment (12).

As for claim 5, Grover et al. discloses the measuring device as recited in claim 1, wherein the tip (4) is designed as a flexible tube (the combination of flexible tube 45 and tubular member 12).

As for claim 6, Grover et al. discloses the measuring device as recited in claim 1, wherein it is preferably possible to also lock the tip into position in a bent state (i.e., it is possible to lock the tip using any locking means).

As for claim 7, Grover et al. discloses the measuring device as recited in claim 1, wherein the measuring electrode (10) is designed as a capacitive primary detector (col. 2, line 50-54; Fig. 3).

As for claim 10, Grover et al. discloses the measuring device as recited in claim 1, wherein the signal line includes a preferably single-core, shielded line, in particular a coaxial line or a high-voltage cable (cable 40 in Fig. 1).

As for claim 11, Grover et al. discloses the measuring device as recited in claim 1, wherein the measuring electrode include fastening means (mounting means 20 or retainer ring 33) for fastening at least part of the measuring device.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8, 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grover et al. (U. S. Patent 4, 302,724) in view of Shimasaki et al. (U. S. Patent 5, 376,886).

As for claims 8 and 9, Grover et al. discloses the measuring device as recited in claim 1. Grover et al. does not specifically disclose that the measuring electrode includes a cap, which is a different color than the tip that is preferably detachably connected with the measuring electrode (3).

Art Unit: 2831

Shimasaki et al. discloses using a cap (4) detachably connected with a measuring electrode, for the purpose of protecting the probe against mechanical vibration, humidity changes, and insulation degradation (col. 3, lines 31-36).

A person of ordinary skill in the art would find it obvious at the time the invention was made to modify Grover et al. to incorporate the use of a cap detachably connected with a measuring electrode, as taught by Shimasaki et al., for the purpose of protecting the measuring electrode from possible damages from mechanical vibration, humidity changes and insulation degradation (col. 3, lines 31-36). Furthermore, the person of ordinary skill in the art would also find it obvious to further modify Grover et al. to disclose using a cap that is a different color than the tip, so that any damaged cap can be easily spotted and replaced later.

As for claim 12, Grover et al. discloses the measuring device as recited in claim 1. Grover et al. does not disclose a preferably capacitive voltage divider (6) is provided.

Shimasaki et al. discloses using a capacitive voltage divider (30 in Fig. 2).

A person of ordinary skill in the art would find it obvious at the time the invention was made to modify Grover et al. to incorporate the use of a capacitive voltage divider, as taught by Shimasaki et al. for dividing the high voltage of the current flowing in the measuring electrode in Grover et al.

6. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grover et al. (U. S. Patent 4, 302,724).

Art Unit: 2831

As for claims 13 and 14, Grover et al. discloses the measuring device as recited in claim 1.

Grover et al. does not specifically disclose that the tip and or the cap are illuminated, and the illumination is supplied externally, in particular via a separate power cord or power supply.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Grover et al. to illuminate the tip and or the cap of the measuring electrode, for the purpose of easily monitoring the illuminated electrode tip or cap for failure. Moreover, the person of ordinary skill in the art would also find it obvious to further modify Grover et al. to disclose that the illumination is supplied externally via a separate power cord, for the purpose of minimizing the size of the measuring device of Grover et al.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Korba (U. S. Patent 4, 026,621) discloses an adaptor to facilitate the use of an ignition timing light on internal combustion engines.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMY HE whose telephone number is (571)272-2230. The examiner can normally be reached on 9:30am-6pm.



Art Unit: 2831

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Amy He/  
Primary Examiner, Art Unit 2831